

### REMARKS

Claims 1-20 are pending in this application. Claims 16 and 18 have been withdrawn from consideration. Claims 1-8, 10-15, 17, 19 and 20 are allowed pursuant to the Notice of Allowance dated 11-DEC-2009.

With this paper, a Request for Continued Examination (RCE) is simultaneously presented along with amendments to claims 1, 10, 17, 19, and 20.

The applicants are presenting this RCE and the amendments because in a previous Office Action, the Examiner rejected claims 1, 17, 19 and 20 under the provisions of 35 U.S.C. § 112 as being indefinite. More particularly, the examiner stated that the terminology “operate in deep saturation” is vague and indefinite. In responding to the Office Action the applicants inadvertently included into those claims recitations that – while exemplary - were unnecessarily narrow.

The applicants submit that the operation of a semiconductor optical amplifier in “deep saturation” as now recited is a regime that would now be readily appreciated by those skilled in the art. As noted in the specification, such a regime is that in which the  $P_{out}(dBm)$  vs.  $P_{in}(dBm)$  slope is smaller than 0.25 which is recited in the claims.

#### Conclusion:

The applicants submit that all of the claims now present in the application fully comply with the provisions of 35 U.S.C. § 112, and 103 and are therefore allowable. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

Respectfully submitted,  
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**CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. 1.8(a)**

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office on February 5, 2010.

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